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CLASSIFICATION OF WORKING TURPENTINE CUPS IN SOUTH GEORGIA BY YEAR OF WORKING AND TURPENTINE HISTORY OF WORKED TREES

By

The Southern Forest Survey Staff

I. F. Eldredge

Regional Survey Director

* - This series of publications releases data gathered in connection with investigations being carried on at the Southern Station. The informaton contained in them is subject to correction or amplification following further investigations. - Editor

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BY YEAR OF WORKING

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The following tables are based on data gathered by the Forest Survey in the course of the field inventory of forest resources now being made in the South. This inventory is a part of the activity of the Southern Forest Experiment Station which is maintained by the United States Forest Service at New Orleans, Louisiana. Field data for these tables were gathered in southern Georgia during the period December 1933 to August 1934. The area to which these tables apply aggregates 15,229,300 acres, and includes all of the area in Georgia Units 1 and 2 (see map on page 5) excepting the Okefenokee swamp and the coastal marsh lands. These tables cover all of the active naval stores territory in Georgia, except a few scattered operations chiefly in and around Taylor County.

Complete analysis of survey data for this area is not yet completed. The figures now being released are preliminary in character, and although they are subject to final correction as the computational work progresses, they are believed to be substantially correct.

Table 1 shows, for the naval stores season 1934-35 by years of working, the number of cups being worked for turpentine in front-cupped and back-cupped crops. The crops were first classified as front-cupped or back-cupped on the ground and the cup-count made in each classified crop without distinguishing between front-cupped and back-cupped trees. In other words, some of the cups recorded in back-cupped crops are hung on front-cupped trees. In the nature of things, only a few back-cupped trees are to be found in front-cupped crops.

Table 1. - Working turpentine cups in front-cupped and back-cupped crops classified by year of working, south Georgia, season 1934-35

Year of working	Number of working cups			Percent of total
	In front-cupped crops	In back-cupped crops	Total	
1st	2,110,000	14,270,000	16,380,000	23
2nd	3,050,000	18,090,000	21,140,000	30
3rd	670,000	5,920,000	6,590,000	10
4th	1,160,000	6,010,000	7,170,000	10
5th	1,540,000	8,300,000	9,840,000	14
6th	690,000	4,520,000	5,210,000	7
7th and up	460,000	3,190,000	3,650,000	6
Total	9,680,000	60,300,000	69,980,000	100
Percent of total	14	86	100	

Table 2 shows the number of working cups by year of working and by diameter of tree on which they are found, regardless of whether the crop was back-cupped or not.

Table 3 shows the number of virgin (first year) cups on front-cupped and back-cupped trees of given diameters. In this table, trees are classified as front or back-cupped independently of the crop in which they are found. As would be expected the total number of virgin cups, 16,380,000 in Table 3 agrees with the total number of first year working cups in Table 1. Comparison of the 2,110,000 virgin cups in front-cupped crops, Table 1, with the 6,255,000 virgin cups on front-cupped trees shown in Table 3 indicates that there are approximately 4,145,000 virgin cups on front-cupped trees found in back-cupped crops.

Table 2. - Working turpentine cups classified by year of working and diameter of working trees, south Georgia, season 1934-35

Tree diameter 4½ feet above ground 2/ inches	Number of Working Cups 1/															
	1st year		2nd year		3rd year		4th year		5th year		6th year		7th year & up		Total	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
3.0- 4.9	55	1	15	neg	0	0	0	0	0	0	0	0	0	0	70	neg
5.0- 6.9	501	3	662	3	218	3	257	4	373	4	45	1	46	1	2,102	3
7.0- 8.9	4,465	27	6,142	29	1,781	27	1,987	28	2,654	27	1,219	23	894	25	19,142	27
9.0-10.9	5,169	32	6,453	30	2,043	31	2,246	31	2,704	27	1,538	29	1,100	30	21,253	30
11.0-12.9	3,315	20	3,993	19	1,392	21	1,358	19	2,145	22	1,240	24	846	23	14,289	21
13.0-14.9	1,906	12	2,298	11	821	12	820	11	1,196	12	762	15	476	13	8,279	12
15.0-16.9	540	3	873	4	200	3	315	4	517	5	246	5	176	5	2,867	4
17.0-18.9	208	1	372	2	80	2	125	2	172	2	74	1	81	2	1,112	2
19.0 plus	221	1	332	2	55	1	62	1	79	1	86	2	31	1	866	1
Total	16,380	100	21,140	100	6,590	100	7,170	100	9,840	100	5,210	100	3,650	100	69,980	100
Per cent of Total	23		30		10		10		14		7		6		100	

1/ In units of 1,000 cups each; to convert to full number of working cups, add 000.

2/ Corrected to remove the influence of turpentining on tree diameter; calculated from diameters measured at 10 feet above ground.

Table 3. - Virgin cups on front-cupped and back-cupped trees, south Georgia, season 1934-35

Tree diameter at 4½ ft. above ground[1]	Cups on front-cupped trees		Cups on back-cupped trees		Total cups	
Inches	Number	Percent	Number	Percent	Number	Percent
3.0- 4.9	55,000	1			55,000	1
5.0- 6.9	407,000	7	94,000	1	501,000	3
7.0- 8.9	2,343,000	37	2,122,000	21	4,465,000	27
9.0-10.9	1,972,000	32	3,197,000	31	5,169,000	32
11.0-12.9	911,000	14	2,404,000	24	3,315,000	20
13.0-14.9	397,000	6	1,509,000	15	1,906,000	12
15.0-16.9	103,000	2	437,000	4	540,000	3
17.0-18.9	27,000	neg	181,000	2	208,000	1
19.0 plus	40,000	1	181,000	2	221,000	1
Total	6,255,000	100	10,125,000	100	16,380,000	100
Percent of total	38		62		100	

[1] Corrected to remove the influence of turpentining on tree diameter; calculated from diameters measured at 10 feet above ground.

Accurate determination of current naval stores yields from data given in the preceding tables depends upon a reliable figure for the yield of turpentine and rosin per 10,000 cups. There is evidence that within the past few years the efficiency of the average naval stores operation has increased perceptibly. Yield figures given below are based on a canvass of practically 100 percent of the still operators in a definite area in Georgia, Florida and South Carolina.[2] The figures of yield per crop thus obtained were, in a large number of cases, found to agree substantially with production records obtained from factors' accounts with the same operators. The figures are given here for what they are worth.

Florida Unit #1,	average 1933-34 yield per crop	42.6	units
Georgia Unit #1,	average 1933-34 yield per crop	43.7	"
S. Carolina Unit #1,	average 1933-34 yield per crop	36.5	"

[2] See map on page 5.

S A S MISSOURI

KENTUCKY

TENNESSEE

NORTH CAROLINA

A HOMA

ARKANSAS

MISSISSIPPI

ALABAMA

GEORGIA

SOUTH CAROLINA

S. Car. Unit #1

Ga. Unit #1

Ga. Unit #2

Fla Unit #2

Fla Unit #1

A S

F L O R I D A

SCALE
50 0 50 100 150 200 MILES

FOREST SURVEY PROGRESS MAP

Completed Sept. 1, 1934

To be completed March 31, 1935

E.J.T.
10-4-34